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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,175	04/03/2007	Nguyet-Phuong Nguyen	9905/40 (BIF116533US/)	3451

90678 7590 08/16/2011
Commissariat a l'Energie Atomique/BHGL
P.O. Box 10395
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EXAMINER	
LUKE, DANIEL M	

ART UNIT	PAPER NUMBER
2813	

MAIL DATE	DELIVERY MODE
08/16/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/577,175	NGUYEN ET AL.	
	Examiner	Art Unit	
	DANIEL LUKE	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5,7,8 and 10-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,7,8 and 10-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/18/2011*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the RCE filed 3/9/2011.

Currently, claims 1, 3-5, 7-8 and 10-33 are pending.

Information Disclosure Statement

The Examiner has considered all of the references submitted as part of the Information Disclosure Statement filed 3/18/2011, but has only found some to be of particular relevance. If Applicant is aware of pertinent materials in the references, he should so state in a response to this office action.

The following is an excerpt from MPEP 609:

"Although a concise explanation of the relevance of the information is not required for English language information, applicants are encouraged to provide a concise explanation of why the English-language information is being submitted and how it is understood to be relevant. Concise explanations (especially those which point out the relevant pages and lines) are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more are highly relevant to patentability."

Further, Applicant is reminded of section 2004, paragraph 13, of the MPEP, stating:

"It is desirable to avoid the submission of long lists of documents if it can be avoided. Eliminate clearly irrelevant and marginally pertinent cumulative information. If a long list is submitted, highlight those documents which have been specifically brought to applicant's attention and/or are known to be of most significance. See Penn Yan Boats, Inc. v. Sea Lark

Boats, Inc., 359 F. Supp. 948, 175 USPQ 260 (S.D. Fla. 1972), aff 'd, 479 F.2d 1338, 178 USPQ 577 (5th Cir. 1973), cert. denied, 414 U.S. 874 (1974). But cf. Molins PLC v. Textron Inc., 48 F.3d 1172, 33 USPQ2d 1823 (Fed. Cir. 1995)."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-5, 7-8, 10-11, 17-19, 24-27 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aspar (US 2003/0077885) in view of Shaheen et al. (US 7,052,978).

Pertaining to claim 1, Aspar shows, while referencing FIG. 1A-D, a method of self-supported transfer of a thin film, the method comprising: preparing a source substrate (1); implanting at least a first species of ions or gas (3) at a first dose in the source substrate at a specified depth with respect to a face (2) of the source substrate, wherein the first species generates defects (4); applying a stiffener (7) in intimate contact with the source substrate; applying a heat treatment to the source substrate, at a specified temperature for a specified time, so as to create, substantially at the given depth, a buried weakened zone, without initiating a thermal splitting of the thin film ([0061], shown in FIG. 1B); and applying a pulse of energy to the source substrate so as to provoke a self-supported splitting of the thin film delimited between the face of the source substrate and the buried weakened zone, with respect to a remainder of the

source substrate in the absence of any additional splitting force ([0055], shown in FIG. 1D; Note that the splitting may be a mechanical pulse, without the use of additional thermal means).

Aspar fails to show that the buried weakened zone includes crystalline defects comprising about 20% to 35% of a total surface area of the source substrate; and that the pulse is applied only to a portion of the buried weakened zone.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Aspar so that the area percentage of the weakened zone is 20% to 35%, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Shaheen teaches in column 12, lines 5-15, 33-34 and 38-43, as well as FIG. 12, that a laser is pulsed at the side of an implanted zone to propagate separation.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to pulse a laser only at the peripherals of the weakened zone of Aspar by pulsing a laser from the sides of the weakened zone, as taught by Shaheen, with the motivation that this technique improves surface roughness post-cleaving (column 13, lines 11-15).

Pertaining to claim 3, the laser is considered to be a thermal provision.

Pertaining to claim 4, Shaheen teaches applying energy comprises a brief movement of small amplitude (laser) applied by a tool (column 12, lines 5-45).

Pertaining to claim 5, Shaheen teaches externally applying a shock energy (laser) in a peripheral zone of the buried weakened zone (column 12, lines 5-45).

Pertaining to claims 7 and 8, Aspar shows the pulse of energy may be applied without thermal means ([0055]). This implies the pulse may be applied at room temperature.

Aspar differs from claims 10 and 11 in that Aspar does not show the specific defect density and defect size, respectively.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Aspar so that the defect size and density coincides with those ranges that are claimed, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Pertaining to claims 17-19, Aspar shows the first species comprises H^+ ([0059]), and is implanted at a dose of $6x10^{16}$ H^+/cm^2.

Pertaining to claims 24-26, Aspar shows the source substrate comprises silicon ([0024], lines 4-10).

Pertaining to claims 24 and 27, Aspar shows the source substrate comprises germanium ([0024], lines 4-10).

Pertaining to claims 24 and 32-33, Aspar shows the source substrate comprises $LiNbO_3$ ([0024], lines 4-10).

Aspar differs from claims 29-31 in that Aspar does not show the specific claimed ranges of temperature and time for the heat treatment step.

However, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to perform the heat treatment at the claimed temperatures and times, since it has been held that where the general conditions of a claim are disclosed in the prior art,

discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233 (1955).

Claims 1, 12, 15-16, 20-21, 24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriceau et al. (US 6,756,286) in view of Shaheen.

Pertaining to claim 1, Moriceau shows a method of self-supported transfer of a thin film, the method comprising: preparing a source substrate (column 11, lines 27-29); implanting at least a first species of ions or gas at a first dose in the source substrate at a specified depth with respect to a face of the source substrate, wherein the first species generates defects (column 11, lines 29-32); applying a stiffener in intimate contact with the source substrate (column 11, lines 55-59); applying a heat treatment to the source substrate, at a specified temperature for a specified time, so as to create, substantially at the given depth, a buried weakened zone, without initiating a thermal splitting of the thin film (column 11, lines 59-64); and applying a pulse of energy to the source substrate so as to provoke a self-supported splitting of the thin film delimited between the face of the source substrate and the buried weakened zone, with respect to a remainder of the source substrate in the absence of any additional splitting force (column 12, lines 8-28; column 4, lines 26-33).

Moriceau fails to show that the buried weakened zone includes crystalline defects comprising about 20% to 35% of a total surface area of the source substrate; and that the pulse is applied only to a portion of the buried weakened zone.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Moriceau so that the area percentage of the

weakened zone is 20% to 35%, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Shaheen teaches in column 12, lines 5-15, 33-34 and 38-43, as well as FIG. 12, that a laser is pulsed at the side of an implanted zone to propagate separation.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to pulse a laser only at the peripherals of the weakened zone of Moriceau by pulsing a laser from the sides of the weakened zone, as taught by Shaheen, with the motivation that this technique improves surface roughness post-cleaving (column 13, lines 11-15).

Pertaining to claim 12, Moriceau shows applying the stiffener comprises applying the stiffener at or before the moment of applying the heat treatment, and wherein the stiffener comprises a target substrate, the heat treatment contributing to improving the bonding energy between source substrate and the target substrate (column 11, line 55 – column 12, line 7).

Pertaining to claims 15-16, Moriceau shows the target substrates comprises monocrystalline silicon (column 12, lines 55-57).

Pertaining to claim 20, Moriceau shows the step of implanting a second species, at a second dose, wherein the second species occupies the defects generated by the first species (column 10, lines 9-33).

Pertaining to claim 21, Moriceau shows the first and second species are implanted at differing implant depths, and wherein the deeper implant is implanted first (column 8, line 52 and column 10, lines 11-13).

Pertaining to claims 24 and 28, Moriceau shows the source substrate is GaAs (column 4, lines 47-49).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moriceau in view of Shaheen as applied to claim 12 above, and further in view of Sakaguchi et al. (US 5,966,620).

Moriceau in view of Shaheen teaches the method of claim 12, but fails to teach the target substrate comprises an amorphous material.

However, Sakaguchi teaches in column 9, line 13 that, for a technique similar to that of Moriceau, an amorphous material is used as the target substrate.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use an amorphous material, as taught by Sakaguchi, as the material of the target substrate of Moriceau in view of Shaheen, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416 (CCPA 1960).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moriceau in view of Shaheen as applied to claim 12 above, and further in view of Aspar et al. (US 6,103,597).

Moriceau in view of Shaheen teaches the method of claim 12, but fails to teach the target substrate comprises fused silica.

However, Aspar teaches in column 1, lines 15-16 that, for a technique similar to that of Moriceau, fused silica is used as the target substrate.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use fused silica, as taught by Aspar, as the material of the target substrate of Moriceau in view of Shaheen, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416 (CCPA 1960).

Claims 20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aspar ('885) in view of Shaheen as applied to claim 1 above, and further in view of Cayrefourcq et al. (US 2004/0171232).

Aspar in view of Shaheen teaches the method of claim 1, but fails to teach that a second species is implanted to occupy the defects generated by the first species, wherein the second species is helium, and wherein the helium is implanted at a dose less than the first dose.

However, Cayrefourcq teaches in [0028] that, in a process for forming a weakened zone, a second species is implanted after implanting a first species so that the second species occupies defects created by the first species. The first species is hydrogen, while the second species is helium ([0030]). The second species is implanted at a dose that is less than the first dose ([0033]).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to implant a second species of helium, as taught by Cayrefourcq, after implanting the hydrogen of Aspar in view of Shaheen, with the motivation that this allows for the substrate to be split at a lower temperature than if only hydrogen were implanted ([0033]).

Claims 1, 3-5, 7-8, 10-11, 17-19, 24-27 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aspar in view of Henley et al. (US 6,511,899).

Pertaining to claim 1, Aspar shows, while referencing FIG. 1A-D, a method of self-supported transfer of a thin film, the method comprising: preparing a source substrate (1); implanting at least a first species of ions or gas (3) at a first dose in the source substrate at a specified depth with respect to a face (2) of the source substrate, wherein the first species generates defects (4); applying a stiffener (7) in intimate contact with the source substrate; applying a heat treatment to the source substrate, at a specified temperature for a specified time, so as to create, substantially at the given depth, a buried weakened zone, without initiating a thermal splitting of the thin film ([0061], shown in FIG. 1B); and applying a pulse of energy to the source substrate so as to provoke a self-supported splitting of the thin film delimited between the face of the source substrate and the buried weakened zone, with respect to a remainder of the source substrate in the absence of any additional splitting force ([0055], shown in FIG. 1D; Note that the splitting may be a mechanical pulse, without the use of additional thermal means).

Aspar fails to show that the buried weakened zone includes crystalline defects comprising about 20% to 35% of a total surface area of the source substrate; and that the pulse is applied only to a portion of the buried weakened zone.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Aspar so that the area percentage of the weakened zone is 20% to 35%, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Henley teaches throughout the reference, but in particular column 8, line 36 – column 10, line 9 and FIG. 1 and 8-9 that, for a process similar to Aspar in which a thin film is separated from a substrate, a laser is pulsed only to a portion of an implanted zone to propagate separation, without any additional splitting force.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, use the laser pulsation technique taught by Henley to separate the thin film of Aspar from the substrate, as taught by Henley, with the motivation that this technique prevents a possibility of damage to either the thin film or the substrate (column 3, lines 51-54).

Pertaining to claim 3, the laser is considered to be a thermal provision.

Pertaining to claim 4, Henley teaches applying energy comprises a brief movement of small amplitude (laser) applied by a tool (inherently, a tool is required to supply the laser pulse).

Pertaining to claim 5, Henley teaches externally applying a shock energy (laser) in a peripheral zone of the buried weakened zone (FIG. 1 and 9).

Pertaining to claims 7 and 8, Aspar shows the pulse of energy may be applied without thermal means ([0055]). This implies the pulse may be applied at room temperature. Further, Henley teaches the pulse of energy is applied at a low temperature, such as room temperature (column 3, lines 14-20).

Aspar differs from claims 10 and 11 in that Aspar does not show the specific defect density and defect size, respectively.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Aspar so that the defect size and density coincides with those ranges that are claimed, since it has been held that discovering an optimum

value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Pertaining to claims 17-19, Aspar shows the first species comprises H^+ ([0059]), and is implanted at a dose of $6x10^{16}$ H^+/cm^2.

Pertaining to claims 24-26, Aspar shows the source substrate comprises silicon ([0024], lines 4-10).

Pertaining to claims 24 and 27, Aspar shows the source substrate comprises germanium ([0024], lines 4-10).

Pertaining to claims 24 and 32-33, Aspar shows the source substrate comprises $LiNbO_3$ ([0024], lines 4-10).

Aspar differs from claims 29-31 in that Aspar does not show the specific claimed ranges of temperature and time for the heat treatment step.

However, it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to perform the heat treatment at the claimed temperatures and times, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233 (1955).

Claims 1, 12, 15-16, 20-21, 24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriceau in view of Henley.

Pertaining to claim 1, Moriceau shows a method of self-supported transfer of a thin film, the method comprising: preparing a source substrate (column 11, lines 27-29); implanting at least

a first species of ions or gas at a first dose in the source substrate at a specified depth with respect to a face of the source substrate, wherein the first species generates defects (column 11, lines 29-32); applying a stiffener in intimate contact with the source substrate (column 11, lines 55-59); applying a heat treatment to the source substrate, at a specified temperature for a specified time, so as to create, substantially at the given depth, a buried weakened zone, without initiating a thermal splitting of the thin film (column 11, lines 59-64); and applying a pulse of energy to the source substrate so as to provoke a self-supported splitting of the thin film delimited between the face of the source substrate and the buried weakened zone, with respect to a remainder of the source substrate in the absence of any additional splitting force (column 12, lines 8-28; column 4, lines 26-33).

Moriceau fails to show that the buried weakened zone includes crystalline defects comprising about 20% to 35% of a total surface area of the source substrate; and that the pulse is applied only to a portion of the buried weakened zone.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Moriceau so that the area percentage of the weakened zone is 20% to 35%, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Henley teaches throughout the reference, but in particular column 8, line 36 – column 10, line 9 and FIG. 1 and 8-9 that, for a process similar to Aspar in which a thin film is separated from a substrate, a laser is pulsed only to a portion of an implanted zone to propagate separation, without any additional splitting force.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, use the laser pulsation technique taught by Henley to separate the thin film of Aspar from the substrate, as taught by Henley, with the motivation that this technique prevents a possibility of damage to either the thin film or the substrate (column 3, lines 51-54).

Pertaining to claim 12, Moriceau shows applying the stiffener comprises applying the stiffener at or before the moment of applying the heat treatment, and wherein the stiffener comprises a target substrate, the heat treatment contributing to improving the bonding energy between source substrate and the target substrate (column 11, line 55 – column 12, line 7).

Pertaining to claims 15-16, Moriceau shows the target substrates comprises monocrystalline silicon (column 12, lines 55-57).

Pertaining to claim 20, Moriceau shows the step of implanting a second species, at a second dose, wherein the second species occupies the defects generated by the first species (column 10, lines 9-33).

Pertaining to claim 21, Moriceau shows the first and second species are implanted at differing implant depths, and wherein the deeper implant is implanted first (column 8, line 52 and column 10, lines 11-13).

Pertaining to claims 24 and 28, Moriceau shows the source substrate is GaAs (column 4, lines 47-49).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moriceau in view of Henley as applied to claim 12 above, and further in view of Sakaguchi.

Moriceau in view of Henley teaches the method of claim 12, but fails to teach the target substrate comprises an amorphous material.

However, Sakaguchi teaches in column 9, line 13 that, for a technique similar to that of Moriceau, an amorphous material is used as the target substrate.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use an amorphous material, as taught by Sakaguchi, as the material of the target substrate of Moriceau in view of Henley, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416 (CCPA 1960).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moriceau in view of Henley as applied to claim 12 above, and further in view of Aspar.

Moriceau in view of Henley teaches the method of claim 12, but fails to teach the target substrate comprises fused silica.

However, Aspar teaches in column 1, lines 15-16 that, for a technique similar to that of Moriceau, fused silica is used as the target substrate.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use fused silica, as taught by Aspar, as the material of the target substrate of Moriceau in view of Henley, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416 (CCPA 1960).

Claims 20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aspar ('885) in view of Henley as applied to claim 1 above, and further in view of Cayrefourcq.

Aspar in view of Henley teaches the method of claim 1, but fails to teach that a second species is implanted to occupy the defects generated by the first species, wherein the second species is helium, and wherein the helium is implanted at a dose less than the first dose.

However, Cayrefourcq teaches in [0028] that, in a process for forming a weakened zone, a second species is implanted after implanting a first species so that the second species occupies defects created by the first species. The first species is hydrogen, while the second species is helium ([0030]). The second species is implanted at a dose that is less than the first dose ([0033]).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to implant a second species of helium, as taught by Cayrefourcq, after implanting the hydrogen of Aspar in view of Henley, with the motivation that this allows for the substrate to be split at a lower temperature than if only hydrogen were implanted ([0033]).

Response to Amendment

The affidavits filed on 3/9/2011 under 37 CFR 1.131 have been considered but are ineffective to overcome the Shaheen reference.

The affidavits make reference to evidence in the form of Exhibits A, B and C. However, this evidence was not filed along with the affidavits. Without such evidence, there is no proof that Applicant's invention predates the filing date of Shaheen. Therefore, the rejection based on Shaheen stands. Assuming Applicant is able to provide such evidence to overcome the Shaheen

reference, new 35 U.S.C. 103(a) rejections have been made in view of newly found prior art Henley et al., as discussed above.

Response to Arguments

Applicant's arguments with respect to claims 1, 3-5, 7-8 and 10-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL LUKE whose telephone number is (571)270-1569. The examiner can normally be reached on Monday through Friday 9:00 a.m. to 5:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Landau can be reached on (571) 272-1731. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. L./
Examiner, Art Unit 2813
8/9/2011

/Matthew C. Landau/
Supervisory Patent Examiner, Art Unit 2813